

### **Abstract**

The present invention is generally directed to a novel process for the production of nanowires and nanobelts and the novel nanostructures which can be produced according to the disclosed processes. The process can be carried out at ambient pressure and includes locating a metal in a reaction chamber, heating the chamber to a temperature at which the metal becomes molten, and flowing a vapor-phase reactant through the chamber. The vapor-phase reactant and the molten metal can react through a thermal CVD process, and nanostructures can form on the surface of the molten metal. Dimensions of the nanostructures can be controlled by reaction temperature.